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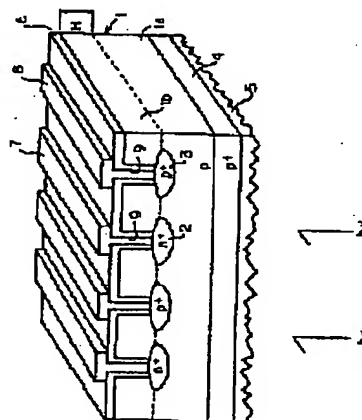
**H01L 31/04**(21) Application number: **02119024**(22) Date of filing: **09.05.90**(71) Applicant: **MITSUBISHI MATERIALS CORP**(72) Inventor: **OI HIROYUKI  
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(57) Abstract:

**PURPOSE:** To prevent the recombination of minority carriers in a base region and increase power generation efficiency by burying an emitter region inside a base region in a solar cell in which one-conductivity semiconductor emitter is formed in contact with another conductivity semiconductor base region.

**CONSTITUTION:** An N-type emitter region 2 and a P\*-type collector region 3 are diffused and formed on the surface of a base region 1 P-type substrate 1a. A P-type layer 1b is epitaxially grown thereon, and the emitter region 2 and the collector region 3 are buried at a position H deep from the surface of the base region 1. A contact hole 9 which communicated with both regions and an insulating film 6 are formed by masking. An insulating film on the bottom surface of the contact hole is removed by sputtering with a mask except an opening of the contact hole 9. Electrodes 7, 8 are formed and connected to regions 2, 3 respectively. As a result, the recombination of minority carriers in an interface of the base region 1 is suppressed, and thus power generation efficiency can be increased.



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